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Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.R Ramshankar Reddy

Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28)		
	Date:	**19-12-2019**
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Field density:	**1**	**2**
Chainages	**6th A cross Phase-1'@140**	**6th A cross Phase-1'@170**
Wt. of wet material from hole (Ww) gms.	5974	5970
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10595	10592
Wt. of sand in hole+ cone (w3) gms.	4405	4408
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3325	3328
Bulk density of sand (γs)gm/cc	1.32	1.32
Bulk density of material(i.e. wt. of the wet material) (γb)=(Ww/w4*(γs))gm/cc	2.37	2.37
Moisture meter reading(moisture content)	6.40	6.20
Result		
FDD(Wt.of the dry material)=(100γb/100+mc)gm/cc	2.23	2.23
MDD	2.27	2.27
OMC	6.10%	6.10%
% compaction obtained	98.19	98.22
% compaction required	98%	98%

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TEJUS CONSULTANTS
No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

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Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 byatarayanapura sub division. 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division. 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.R Ramshankar Reddy

Field Dry Density test by Sand Replacement Method (As per IS 2720 (Part 28)		
	Date:	20-12-2019
Layer no. or level	WMM I layer	
Depth of hole	200mm	
Field density:	1	2
Chainages	6th A cross Phase-1'@200	6th A cross Phase-1'@220
Wt. of wet material from hole (Ww) gms.	5968	5980
Wt. of sand+cylinder before pouring (w1) gms.	15000	15000
Wt. of sand+cylinder after pouring (w2) gms.	10595	10592
Wt. of sand in hole+ cone (w3) gms.	4405	4408
Wt. of cone gms.	1080	1080
Wt. of sand gms.	3325	3328
Bulk density of sand (ys)gm/cc	1.32	1.32
Bulk density of material(i.e. wt. of the wet material) (yb)=(Ww/w4*(ys))gm/cc	2.37	2.37
Moisture meter reading(moisture content)	6.40	6.20
Result		
FDD(Wt.of the dry material)=(100yb/100+mc)gm/cc	2.23	2.23
MDD	2.27	2.27
OMC	6.10%	6.10%
% compaction obtained	98.09	98.39
% compaction required	98%	98%

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No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwarenagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

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Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.R Ramshankar Reddy

AGGREGATE IMPACT VALUE (IS: 2386 Part - 4)

Proposed Use	DBM	**Date of Sampling**	**21-12-2019**
Sample Location	At plant	**Date of Testing**	**21-12-2019**

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	384.00	372.00	366.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	290.00	282.00	278.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	94.00	90.00	88.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	24.48	24.19	24.04	
5	Average Aggregate impact value	(%)	24.24			Max - 30 %

Remarks : ✓ Satisfactory / Not Satisfactory

Consultant's Representative

TEJUS CONSULTANTS
No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

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Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.R Ramshankar Reddy

FLAKINESS AND ELONGATION INDICES (IS 2386, PART I)

Type of Material	DBM	**Proposed Use**	DBM
Sample Location	At plant	**Date of Sampling**	21-12-2019
		Date of Testing	21-12-2019

Size of aggregate		**Flakiness Index**		**Elongation Index**	
Passing through IS sieve, mm	**Retained on IS sieve, mm**	**Total wt. of aggregate retained on sieves (A) gms.**	**Wt. of aggregate passing from Flakiness gauge (B) gms**	**Wt. of aggregate retained on Flakiness gauge (C) gms**	**Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms**
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	7842	670	7072	382
31.5	25.0	4236	201	3582	296
25.0	20.0	2452	276	1994	224
20.0	16.0	1558	340	982	254
16.0	12.5	562	105	456	172
12.5	10.0	486	55	258	92
10.0	6.3	134	90	85	64
Total		**17270**	**1737**	**14429**	**1484**

Results

Flakiness Index(%):	10.06
Elongation Index(%):	10.28
Combined FI+EL (%)	20.34

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Name of Work	:	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	21-12-2019
Type of Mix	:	DBM
Sample I/D	:	DBM-1

GRADATION FOR DBM

(As per MORT&H 500-10,Grading-2)

Sample Location:	At plant	**Date of Sampling:**	20-12-2019
		Date of testing:	21-12-2019
Type of material & Purpose:	DBM	**Oven Dry Wt.(gms):**	1500.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
37.50	0	0	0.00	100.00	100.00
26.50	96	96	6.40	93.60	90-100
19.00	116	212	14.13	85.87	71-95
13.20	232	444	29.60	70.40	56-80
4.750	315	759	50.60	49.40	38-54
2.360	183	942	62.80	37.20	28-42
0.300	272	1214	80.93	19.07	7-21
0.075	202	1416	94.40	5.60	2-8
Pan	84	1500			
Total	1500.0				

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Consultant's Representative

TEJUS CONSULTANTS
No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

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Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.R Ramshankar Reddy

AGGREGATE IMPACT VALUE (IS: 2386 Part - 4)

Proposed Use	BC	**Date of Sampling**	**21-12-2019**
Sample Location	At plant	**Date of Testing**	**21-12-2019**

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	380.00	394.00	366.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	294.00	304.00	284.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	86.00	90.00	82.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	22.63	22.84	22.40	
5	Average Aggregate impact value	(%)	22.63			Max - 30 %

Remarks : Satisfactory / Not Satisfactory

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No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079. O : +91 80 23287532, tejusconsultants@gmail.com

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Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.R Ramshankar Reddy

FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Type of Material	BC		**Proposed Use**	**BC**
Sample Location	At plant		**Date of Sampling**	21-12-2019
			Date of Testing	21-12-2019

Size of aggregate		**Flakiness Index**		**Elongation Index**	
Passing through IS sieve, mm	**Retained on IS sieve, mm**	**Total wt. of aggregate retained on sieves (A) gms.**	**Wt. of aggregate passing from Flakiness gauge (B) gms**	**Wt. of aggregate retained on Flakiness gauge (C) gms**	**Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms**
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	970	82	940	70
16.0	12.5	1212	115	1242	122
12.5	10.0	522	68	430	54
10.0	6.3	488	62	428	70
Total		**3192**	**327**	**3040**	**316**

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	10.24
Elongation Index(%):	10.39
Combined FI+EL (%)	20.64

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BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE BITUMINOUS MACADAM MIX

Name of Work	:	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	22-12-2019
Type of Mix	:	DBM
Sample I/D	:	DBM-1

DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	836	922
2. Weight of Mixture after extraction, g	800	882
3. Weight of Bitumen	36	40
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.00	4.00
6. Weight of fines, g	2.00	2.00
7. Weight of Bitumen & fines	38.00	42.00
8. Bitumen content in %	4.55	4.56
9. Average Bitumen content in %	4.55	
10. Minimum Bitumen content in %	4.50	

GRADATION FOR DBM AFTER EXTRACTION

(As per MORT&H 500-10,Grading-2)

Sample Location:	At site	**Date of Sampling:**	22-12-2019
		Date of testing:	22-12-2019
Type of material & Purpose:	DBM	**Oven Dry Wt.(gms):**	800

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
37.50	0.0	0.0	0.00	100.00	100.00
26.50	38.0	38.0	4.75	95.25	90-100
19.00	126.0	164.0	20.50	79.50	71-95
13.20	104.0	268.0	33.50	66.50	56-80
4.750	158.0	426.0	53.25	46.75	38-54
2.360	94.0	520.0	65.00	35.00	28-42
0.300	156.0	676.0	84.50	15.50	7-21
0.075	88.0	764.0	95.50	4.50	2-8
Pan	36.0				
Total	800.0				

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Name of Work	:	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	22-12-2019
Type of Mix	:	Tack coat DBM
Sample I/D	:	1

DETERMINATION OF RATE OF SPREAD TACK COAT

Determination	Unit	Test No	
		1	2
Size of Plate (mxm)	Mt	0.30 x 0.30	0.30 x 0.30
Area of Plate (a)	Sq.mtr	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.784	0.782
Final weight of plate after application of tack Coat (c)	Kg	0.807	0.805
Weight of tack coat (d=c-b)	Kg	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.254	0.253
Average	Kg/sq.m	0.254	
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**	

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Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.R Ramshankar Reddy

AGGREGATE IMPACT VALUE (IS: 2386 Part - 4)

Proposed Use	BC	**Date of Sampling**	**22-12-2019**
Sample Location	At plant	**Date of Testing**	**22-12-2019**

Sl. No.	Description		Test No. 1	Test No. 2	Test No. 3	Spec Limit (%)
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	386.00	390.00	378.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	296.00	294.00	290.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	90.00	96.00	88.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	23.32	24.62	23.28	
5	Average Aggregate impact value	(%)	23.74			Max - 30 %

Remarks : Satisfactory / Not Satisfactory

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No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

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Name of Work	:	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	22-12-2019
Type of Mix	:	Tack coat DBM
Sample I/D	:	2

DETERMINATION OF RATE OF SPREAD TACK COAT

Determination	Unit	Test No	
		1	2
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x 0.30
Area of Plate (a)	Sq.mtr	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.768	0.752
Final weight of plate after application of tack Coat (c)	Kg	0.791	0.775
Weight of tack coat (d=c-b)	Kg	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.254	0.250
Average	Kg/sq.m	0.252	
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**	

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Name of Work	:	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	22-12-2019
Type of Mix	:	Tack coat
Sample I/D	:	1

DETERMINATION OF RATE OF SPREAD TACK COAT

Determination	**Unit**	**Test No**	
		1	**2**
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.798	0.846
Final weight of plate after application of tack Coat (c)	Kg	0.821	0.869
Weight of tack Coat (d=c-b)	Kg	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.256	0.254
Average	Kg/sq.m	0.255	
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**	

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Name of Work	:	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	22-12-2019
Type of Mix	:	Tack coat
Sample I/D	:	2

DETERMINATION OF RATE OF SPREAD TACK COAT

Determination	Unit	Test No	
		1	2
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.784	0.848
Final weight of plate after application of tack Coat (c)	Kg	0.807	0.871
Weight of tack Coat (d=c-b)	Kg	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.251	0.252
Average	Kg/sq.m	0.252	
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**	

Consultant's Representative

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No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

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Name of Work	:	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division. 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	22-12-2019
Type of Mix	:	Tack coat
Sample I/D	:	2

DETERMINATION OF RATE OF SPREAD TACK COAT

Determination	**Unit**	**Test No**	
		1	**2**
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.784	0.848
Final weight of plate after application of tack Coat (c)	Kg	0.807	0.871
Weight of tack Coat (d=c-b)	Kg	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.251	0.252
Average	Kg/sq.m	0.252	
Specified Limit	Kg/sq.m	**0.250 Kg/sq.m**	

Consultant's Representative

TEJUS CONSULTANTS
No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

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Project	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division, 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	Bruhat Bengaluru Mahanagara Palike
Consultant	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	Sri.R Ramshankar Reddy

FLAKINESS AND ELONGATION INDICES (IS 2386, PART I)

Type of Material	BC	Proposed Use	BC
Sample Location	At plant	Date of Sampling	22-12-2019
		Date of Testing	22-12-2019

Size of aggregate		Flakiness Index		Elongation Index	
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	0	0	0	0
31.5	25.0	0	0	0	0
25.0	20.0	0	0	0	0
20.0	16.0	972	84	946	72
16.0	12.5	1215	112	1248	120
12.5	10.0	518	68	430	54
10.0	6.3	495	62	436	72
Total		**3200**	**326**	**3060**	**318**

Note: Minimum 200 Pcs should be taken on each fraction of test

Flakiness Index(%):	10.19
Elongation Index(%):	10.39
Combined FI+EL (%)	20.58

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TEJUS CONSULTANTS
No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079, O : +91 80 23287532, tejusconsultants@gmail.com

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GRADATION FOR BC
(As per MORT&H 500-18,Grading-2)

Name of Work	:	*Package-10.1. Construction of anganawadi building at [illegible] bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.06 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No.06 Byatarayanapura Sub division, 4.Improvements to [illegible] at Shivaramakaranthanagara 1st stage cross roads in Ward No.06 Byatarayanapura Sub division.*
Client	:	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant	:	M/s Tejus Consultants
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	22.12.2019
Type of Mix	:	BC
Sample I/D	:	BC1

Sample Location:	At plant	Date of Sampling:	22.12.2019
Type of material & Purpose:	BC	Date of testing:	22.12.2019
		Oven Dry Wt.(gms):	1200.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	136	136.0	11.33	88.67	79 - 100
9.50	134	270.0	22.50	77.50	71 - 95
4.75	232	502.0	41.83	58.17	53 - 71
2.360	138	640.0	53.33	46.67	42 - 58
1.180	122	762.0	63.50	36.50	34 - 48
0.600	112	874.0	72.83	27.17	26 - 38
0.300	98	972.0	81.00	19.00	18 - 28
0.150	70	1042.0	86.83	13.17	12 - 20
0.075	50	1092.0	91.00	9.00	4 - 10
Pan	108.0	1200.0			
Total	1200.0				

Note:
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2. The results indicated above are based on the tests carried out on the samples received in the laboratory/Site.
3. Any Query regarding the report must be reported reported within 15days from the date of testing.

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TEJUS CONSULTANTS
No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079. O : +91 80 23287532, tejusconsultants@gmail.com

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BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work	:	Package-10.1. Construction of anganwadi building at kogilu in ward no05 byrasandra sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No.05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivanmakaranthanagara 1st stage cross roads in Ward No.05 Byatarayanapura Sub division.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	22-12-2019
Type of Mix	:	BC
Sample I/D	:	BC1

DETERMINATION OF BITUMEN CONTENT		
Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	937	918
2. Weight of Mixture after extraction, g	888	870
3. Weight of Bitumen	49	48
4. Weight of filter paper before extraction, g	2.00	2.10
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	2.10	1.90
7. Weight of Bitumen & fines	51.10	49.90
8. Bitumen content in %	5.45	5.44
9. Average Bitumen content in %	5.44	
10. Minimum Bitumen content in %	5.40	

GRADATION FOR BC AFTER EXTRACTION

(As per MORTH & 500-1&Grading-2)

Sample Location:	At site	Date of Sampling:	22-12-2019
		Date of testing:	22-12-2019
Type of material & Purpose:	BC	Oven Dry Wt.(gms):	888.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	82	82.0	9.23	90.77	79 - 100
9.50	136	218.0	24.55	75.45	71 - 95
4.75	94	312.0	35.14	64.86	53 - 71
2.360	142	454.0	51.13	48.87	42 - 58
1.180	102	556.0	62.61	37.39	34 - 48
0.600	78	634.0	71.40	28.60	26 - 38
0.300	60	694.0	78.15	21.85	18 - 28
0.150	54	748.0	84.23	15.77	12 - 20
0.075	96	844.0	95.05	4.95	4 - 10
Pan	44.0	888.0			
Total	888.0				

Consultant's Representative

TEJUS CONSULTANTS
No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Baseweshwarenagar, Bangalore - 560079. O : +91 80 23287532, tejusconsultants@gmail.com

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BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX		
Name of Work	:	Package-10.1. Construction of anganawadi building at kogilu in ward no05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	22-12-2019
Type of Mix	:	BC
Sample I/D	:	BC2

DETERMINATION OF BITUMEN CONTENT		
Description	**Trail 1**	**Trail 2**
1. Weight of Mixture before extraction, g	930	918
2. Weight of Mixture after extraction, g	881	870
3. Weight of Bitumen	49	48
4. Weight of filter paper before extraction, g	2.10	2.15
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	2.00	1.85
7. Weight of Bitumen & fines	51.00	49.85
8. Bitumen content in %	5.48	5.43
9. Average Bitumen content in %	**5.46**	
10. Minimum Bitumen content in %	**5.40**	

GRADATION FOR BC AFTER EXTRACTION

(As per MORTH & 500-18,Grading-2)

Sample Location:	At site	Date of Sampling:	**22-12-2019**		
		Date of testing:	**22-12-2019**		
Type of material & Purpose:	**BC**	Oven Dry Wt.(gms):	881.0		
IS Sieve size in mm	**Weight retained**	**Cummulative weight retained (gm)**	**Cummulative % of retained**	**Cummulative % of passing**	**Specification limits**
19.00	0	0	0.00	100.00	100.00
13.20	88	88.0	9.99	90.01	79 - 100
9.50	120	208.0	23.61	76.39	71 - 95
4.75	92	300.0	34.05	65.95	53 - 71
2.360	154	454.0	51.53	48.47	42 - 58
1.180	112	566.0	64.25	35.75	34 - 48
0.600	76	642.0	72.87	27.13	26 - 38
0.300	70	712.0	80.82	19.18	18 - 28
0.150	46	758.0	86.04	13.96	12 - 20
0.075	69	827.0	93.87	6.13	4 - 10
Pan	54.0	881.0			
Total	881.0				

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No. 58, 3rd main, 6th Cross, 1st Stage KHB Colony, Basaveshwaranagar, Bangalore - 560079. O : +91 80 23287532, tejusconsultants@gmail.com

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GRADATION FOR BC
(As per MORT&H 500-18,Grading-2)

Name of Work	:	Package-10.1. Construction of anganawadi building at bagalur in ward no.05 bytarayanapura sub division, 2.Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3.Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4.Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	:	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant	:	M/s Tejus Consultants
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	22-12-2019
Type of Mix	:	BC
Sample I/D	:	BC1

Sample Location:	At plant	Date of Sampling:	22.12.2019
Type of material & Purpose:	BC	Date of testing:	22-12-2019
		Oven Dry Wt.(gms):	1200.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	128	128.0	10.67	89.33	79 - 100
9.50	112	240.0	20.00	80.00	71 - 95
4.75	224	464.0	38.67	61.33	53 - 71
2.360	126	590.0	49.17	50.83	42 - 58
1.180	134	724.0	60.33	39.67	34 - 48
0.600	108	832.0	69.33	30.67	26 - 38
0.300	126	958.0	79.83	20.17	18 - 28
0.150	66	1024.0	85.33	14.67	12 - 20
0.075	100	1124.0	93.67	6.33	4 - 10
Pan	76.0	1200.0			
Total	1200.0				

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BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX		
Name of Work	:	Package-10.1: Construction of anganawadi building at koguru in ward no09 byatarayanapura sub division, 2 Improvements of roads and drains at Ward No.05 to Ward No.06 and 07 connecting roads in Ward No.05 Byatarayanapura Sub Division. 3 Improvements to Roads and Drains at Telecom Layout Cross Roads in Ward No 05 Byatarayanapura Sub division, 4 Improvements to Roads and Drains at Shivaramakaranthanagara 1st stage cross roads in Ward No 05 Byatarayanapura Sub division.
Client	:	Bruhat Bengaluru Mahanagara Palike
Consultant	:	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	:	Sri.R Ramshankar Reddy
Date of Testing	:	23-12-2019
Type of Mix	:	BC
Sample I/D	:	BC4

DETERMINATION OF BITUMEN CONTENT		
Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	950	934
2. Weight of Mixture after extraction, g	900	885
3. Weight of Bitumen	50	49
4. Weight of filter paper before extraction, g	2.00	2.15
5. Weight of filter paper after extraction, g	4.10	4.00
6. Weight of fines, g	2.10	1.85
7. Weight of Bitumen & fines	52.10	50.85
8. Bitumen content in %	5.48	5.44
9. Average Bitumen content in %	5.46	
10. Minimum Bitumen content in %	5.40	

GRADATION FOR BC AFTER EXTRACTION

(As per MORTH & 500-18,Grading-2)

Sample Location:	At site		Date of Sampling:	23-12-2019	
			Date of testing:	23-12-2019	
Type of material & Purpose:	BC		Oven Dry Wt.(gms):	900.0	
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	82	82.0	9.11	90.89	79 - 100
9.50	120	202.0	22.44	77.56	71 - 95
4.75	88	290.0	32.22	67.78	53 - 71
2.360	156	446.0	49.56	50.44	42 - 58
1.180	112	558.0	62.00	38.00	34 - 48
0.600	84	642.0	71.33	28.67	26 - 38
0.300	72	714.0	79.33	20.67	18 - 28
0.150	40	754.0	83.78	16.22	12 - 20
0.075	69	823.0	91.44	8.56	4 - 10
Pan	77.0	900.0			
Total	900.0				

Consultant's Representative

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